

WHAT IS CLAIMED IS:

1. An integrated circuit inductor, the integrated circuit having a silicon substrate and an oxide layer on the silicon substrate, the inductor comprising:
- an inductive loop deposited on the oxide layer;
- a plurality of apertures in the oxide layer beneath the inductive loop;
- a plurality of bridges adjacent the apertures and provided by portions of the oxide between an inner region and an outer region of the oxide layer, respectively within and without the inductive loop, the loop being supported on the bridges; and
- a trench formed in the silicon substrate beneath the bridges, to provide an air gap between the inductive loop and the silicon substrate.
2. The integrated circuit inductor as claimed in Claim 1, wherein the apertures and the bridges extend generally radially of the inner region.
3. The integrated circuit inductor as claimed in Claim 1, wherein the trench extends circumferentially of the inner region.
4. The integrated circuit inductor as claimed in Claim 2, wherein the trench extends circumferentially of the inner region.
5. The integrated circuit inductor as claimed in Claim 1, wherein the inductive loop has a plurality of spirally arranged turns.
6. The integrated circuit inductor as claimed in Claim 2, wherein the inductive loop has a plurality of spirally arranged turns.
7. The integrated circuit inductor as claimed in Claim 3, wherein the inductive loop has a plurality of spirally arranged turns.
8. An integrated circuit inductor as claimed in claim 1, wherein the oxide layer includes an underpass connection in one of the bridges from a peripheral connection for one end of the inductor to its inner end.
9. A method of making an integrated circuit inductor, the integrated circuit having a silicon substrate and an oxide layer on the silicon substrate, the method comprising:
- depositing the inductive loop on the oxide layer;
- opening the apertures in the oxide beneath the inductive loop and providing the bridges to support the loop; and

forming the trench in the silicon substrate beneath the bridges.

10. The method as claimed in Claim 9, wherein the trench is formed by etching of the silicon substrate.

5 11. The method as claimed in Claim 9, wherein the etching is continued until the trench is continuous beneath the extent of the inductive loop.

12. The method as claimed in Claim 10, wherein the etching is continued until the trench is continuous beneath the extent of the inductive loop.

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